Claims

We claim:

1. A method for suppressing or inhibiting IgE production, said method comprising administering an effective amount of interferon tau or a chimeric interferon, wherein said chimeric interferon comprises a mammalian interferon tau amino terminus and a human type I interferon carboxy terminus other than interferon tau, or a biologically active fragment of said interferon tau or said chimeric interferon.

2. The method according to claim 1, wherein said mammalian interferon tau amino terminus is from a mammal selected from the group consisting of primate, ovine and bovine.

3. The method according to claim 1, wherein said chimeric interferon comprises amino acid residues from about amino acid residue 1 to about amino acid residue 27 of ovine interferon tau and amino acid residues from about amino acid residue 28 to about amino acid residue 166 of human interferon alpha.

4. The method according to claim 3, wherein said interferon alpha is interferon alpha D.

5. The method according to claim 1, wherein said interferon tau or said chimeric interferon is administered to a person or animal in need of suppression or inhibition of IgE production.

6. The method according to claim 1, wherein said suppression or inhibition of IgE production occurs through inhibition of B-cell IgE secretion or inhibition of B-cell proliferation.

7. The method according to claim 5, wherein said interferon tau or said chimeric interferon is administered by routes selected from the group consisting of oral administration, parenteral administration, subcutaneous administration and intravenous administration.

8. The method according to claim 7, wherein said person or animal is afflicted with, or predisposed to, an IgE-related condition.

9. The method according to claim 8, wherein said allergic condition is selected from the group consisting of allergic rhinitis, atopic dermatitis, bronchial asthma and food allergy.

10. The method according to claim 1, wherein said interferon tau or said chimeric interferon is administered *in vitro*.

11. The method according to claim 1, wherein said interferon tau or said chimeric interferon is formulated in a pharmaceutically acceptable carrier or diluent.

12. A composition comprising a chimeric type I interferon, or a biologically active mutein, fragment, variant or peptide thereof, which is capable of suppressing or inhibiting IgE production, wherein said chimeric IFN comprises part of at least two IFNs selected from the group consisting of IFNα, IFNβ, IFNτ and IFNω.

13. The composition according to claim 12, wherein said suppression or inhibition of IgE production occurs through inhibition of B-cell IgE secretion or inhibition of B-cell proliferation.

14. The composition according to claim 12, wherein said chimeric IFN comprises a mammalian IFNτ amino terminus and a human type I IFN carboxy terminus other than IFNτ.

15. The composition according to claim 14, wherein said mammalian IFNτ amino terminus is from a mammal selected from the group consisting of primate, ovine and bovine.

16. The composition according to claim 14, wherein said chimeric IFN comprises amino acid residues from about 1 to about 27 of ovine IFNτ and amino acid residues from about 28 to about 166 of human IFNα.

17. The composition according to claim 16, wherein said IFNα is IFNαD.

18. The composition according to claim 12, wherein said chimeric IFN is recombinantly produced and is expressed in *Pichia pastoris*.

19. A method for suppressing or inhibiting IL-4 production, said method comprising contacting an immune cell with a type I interferon, or a biologically active mutein, fragment, variant or peptide thereof.